IN THE CLAIMS

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. (currently amended): [[Method]] A method of generating a reference event in a receiving network node receiving frames of information from a transmitting network node, [[the]] said method, executed when a frame of information is received, comprises the following steps ~~executed when a frame of information is received~~:

[[-]] sampling the frame of information in order to form sampled data[[,]];

[[-]] processing the sampled data in order to detect ~~among said~~ from the sampled data a specific data[[,]];

[[-]] monitoring the number of processed sampled data until the detection of [[a]] the specific data[[,]]; and

[[-]] generating from the received frame of information the [[a]] reference event ~~according to~~ on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result of said monitoring ~~steps~~ step.

Claim 2. (currently amended): [[Method]] A method according to claim 1, wherein the frame of information is constituted of a preamble[[,]] and a data frame.

Claim 3. (currently amended): [[Method]] A method according to claim 2, ~~wherein the method comprises~~ further comprising the step of detecting [[of]] a start of the preamble.

Claim 4. (currently amended): [[Method]] A method according to claim 2, wherein the specific data is a start [[of]] the data frame.

Claim 5. (currently amended): [[Method]] A method according to claim 4, wherein [[the]] said processing step processes the sampled data until [[the]] detection of the start of the data frame.

Claim 6. (currently amended): [[Method]] A method according to claim 1, further comprising [[a]] the step of counting pulses of a sampling clock.

Claim 7. (currently amended): [[Method]] A method according to claim 3, further comprises the step of counting pulses of a sampling clock, wherein [[the]] said processing step

starts to process the sampled data at a predetermined number of clock ~~samples~~ pulses after ~~the detection of~~ detecting the start of the preamble.

Claim 8. (currently amended): [[Method]] A method according to claim 3, wherein [[the]] said monitoring step starts to monitor the processed data at a predetermined number of clock ~~samples~~ pulses after ~~the detection of~~ detecting the start of the preamble.

Claim 9. (currently amended): [[Method]] A method according to ~~claims 6 and 7~~ claim 7, wherein~~, the~~ said step of counting pulses of a sampling clock starts at the same time as [[the]] said processing step.

Claim 10. (currently amended): [[Method]] A method according to claim 6, ~~wherein once a specific data is detected, the~~ said step of generating [[a]] the reference event ~~comprises further steps of~~ includes:

[[-]] adding the number of monitored processed sampled data to a predetermined value[[,]]; and

[[-]] generating [[a]] the reference event when the counted sampling clock [[equals]] is equal to the result of said adding step.

Claim 11. (currently amended): [[Method]] A method according to claim 1, wherein the processing step ~~comprises further steps of~~ includes:

[[-]] reading sampled data into a memory[[,]];

[[-]] making a Fast Fourier Transform [[on]] from the read data[[,]];

[[-]] correlating the transformed data to a predetermined data[[,]]; and

[[-]] detecting [[a]] the specific data according to a result of said correlating [[result]] step.

Claim 12. (currently amended): [[Method]] A method according to claim 11, wherein [[the]] said correlating step ~~further comprises the step of~~ includes:

[[-]] detecting the maximum value of correlation[[,]];

[[-]] memorizing information related to the maximum value of correlation[[,]]; and

[[-]] checking if the correlation of next samples is lower than detected maximum value.

Claim 13. (currently amended): [[Method]] A method according to claim 1, [[the]] said method further comprises ~~further~~ the steps of:

[[-]] reading information representing a second clock at the appearance of the reference event[[,]];

[[-]] reading ~~synchronisation~~ synchronization information inserted in the received frame[[,]];

[[-]] calculating a difference between the information representing a second clock at the appearance of the reference event and the synchronization information[[,]]; and

[[-]] modifying the information representing the second clock according to the results of [[the]] said calculation step.

Claim 14. (currently amended): [[Method]] A method according to claim 1, [[the]] said method comprises further steps of:

[[-]] reading information representing a second clock at the appearance of the reference event,

[[-]] reading ~~synchronisation~~ synchronization information inserted in the received frame,

[[-]] calculating a difference between the information representing a second clock at the appearance of the reference event and the synchronization information[[,]]; and

[[-]] generating an information message on the network the node is connected to, the message containing information representing the results of ~~the subtracting~~ said calculation step.

Claim 15. (currently amended): [[Method]] A method of ~~synchronisation~~ synchronization between communication networks exchanging information by ~~frame~~ frames of ~~informations~~ information, each communication network having a clock and the number of clock pulses is monitored by a counter, [[the]] said method comprises the ~~following~~ steps of:

[[-]] reading information representing the counted clock pulses of the clock of the first network at the appearance of a reference event[[,]];

[[-]] inserting at least [[said]] the information or calculated information on the basis of [[said]] information into the frame of information as the ~~synchronisation~~ synchronization information[[,]];

[[-]] transferring [[said]] the frame of information from [[the]] a first network to [[the]] a second network[[,]];

[[-]] sampling the received frame of information in order to form sampled data[[,]];

[[-]] processing the sampled data in order to detect ~~among said~~ from the sampled data a specific data[[,]];

[[-]] monitoring the number of processed sampled data until [[the]] detection of [[a]] the specific data[[,]];

[[-]] generating [[a]] the reference event according to the result of said monitoring [[steps,]] step;

[[-]] reading information representing the number of counted clock pulses of the clock of the second network at the appearance of the reference event[[,]];

[[-]] reading ~~synchronisation~~ synchronization information inserted in the received frame of information from the first network[[,]];

[[-]] calculating a difference between the information representing the number of counted clock pulses of the clock of the second network at the appearance of the reference event and the synchronization information[[,]]; and

[[- synchronising]] synchronizing the second network.

Claim 16. (currently amended): ~~Apparatus~~ An apparatus for generating a reference event in a receiving network node receiving frames of information from a transmitting network node, the apparatus comprises:

[[-]] sampling means for sampling the frame of information in order to form sampled data[[,]];

[[-]] processing means for processing sampled data in order to detect ~~among said~~ from the sampled data a specific data[[,]];

[[-]] monitoring means for monitoring the number of processed sampled data until the detection of [[a]] the specific data[[,]]; and

[[-]] generating means for generating from the received frame of information the [[a]] reference event ~~according to~~ on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result [[of]] from said monitoring means.

Claim 17. (currently amended): ~~Apparatus~~ An apparatus according to claim 16, wherein the frame of information is constituted of a preamble and a data frame.

Claim 18. (currently amended): ~~Apparatus~~ An apparatus according to claim 17, wherein [[the]] said apparatus further comprises ~~further~~ means [[of]] for detecting a start of the preamble.

Claim 19. (currently amended): ~~Apparatus~~ An apparatus according to claim 17, wherein the specific data is a start of the data frame.

Claim 20. (currently amended): ~~Apparatus~~ An apparatus according to claim 19, wherein [[the]] said processing means processes the sampled data until [[the]] detection of the start of the data frame.

Claim 21. (currently amended): ~~Apparatus~~ An apparatus according to claim 16, further comprising counting means for counting pulses of a sampling clock.

Claim 22. (currently amended): ~~Apparatus~~ An apparatus according to claim 18, wherein said apparatus further comprises counting means for counting pulses of a sampling clock, wherein [[the]] said processing means ~~for processing~~ starts ~~to process~~ processing the sampled data at a predetermined number of clock ~~samples~~ pulses after ~~the detection of~~ detecting the start of the preamble.

Claim 23. (currently amended): ~~Apparatus~~ An apparatus according to claim 18, wherein [[the]] said monitoring means ~~for monitoring~~ starts ~~to monitor~~ monitoring the processed data at a predetermined number of clock ~~samples~~ pulses after ~~the detection of~~ detecting the start of the preamble.

Claim 24. (currently amended): ~~Apparatus~~ An apparatus according to ~~claims 21 and~~ claim 22, wherein, [[the]] said counting means for counting pulses of a sampling clock starts counting at the same time as [[the]] said processing means starts to process sampled data.

Claim 25. (currently amended): ~~Apparatus~~ An apparatus according to claim 21, ~~wherein once a specific data is detected, the~~ said generating means for generating [[a]] the reference event comprises ~~further means of~~:

[[-]] adding means for adding the number of monitored processed sampled data to a predetermined value[[,]]; and

[[-]] generating means for [[a]] the reference event when the counted sampling clock equals to the result of adding means.

Claim 26. (currently amended): ~~Apparatus~~ An apparatus according to claim 18, wherein [[the]] said processing means comprises ~~further means of~~:

[[-]] reading means for reading sampled data into a memory[[,]];

[[- Transform]] transforming means for making a Fast Fourier Transform [[on]] from the read data[[,]];

[[-]] correlating means for correlating the transformed data to a predetermined data[[,]] ; and

[[-]] detecting means for detecting [[a]] the specific data according to the result from said correlating [[result]] means.

Claim 27. (currently amended): ~~Apparatus~~ An apparatus according to claim 26, wherein [[the]] said correlating means [[further]] comprises ~~the means of~~:

[[-]] detecting means for detecting the maximum value of correlation[[,]];

[[- memorising]] memorizing means for ~~memorising~~ memorizing information related to the maximum value of correlation[[,]]; and

[[-]] checking means for checking if the correlation of next samples is lower than detected maximum value.

Claim 28. (currently amended): ~~Apparatus~~ An apparatus according to claim 16, [[the]] said apparatus ~~comprises~~ further ~~means of~~ comprises:

[[-]] first reading means for reading information representing a second clock at the appearance of the reference event[[,]];

[[-]] second reading means for reading ~~synchronisation~~ synchronization information inserted in the received frame[[,]];

[[-]] calculating means for calculating a difference between the information representing a second clock at the appearance of the reference event and the synchronization information[[,]]; and

[[-]] modifying means for modifying the information representing the second clock according to the results of [[the]] said calculation means.

Claim 29. (currently amended): ~~Apparatus~~ An apparatus according to claim 16, wherein [[the]] said apparatus further comprises ~~further means of~~:

[[-]] first reading means for reading information representing a second clock at the appearance of the reference event[[,]];

[[-]] second reading means for reading ~~synchronisation~~ synchronization information inserted in the received frame[[,]];

[[-]] calculating means for calculating a difference between the information representing a second clock at the appearance of the reference event and the synchronization information[[,]]; and

[[-]] generating means for generating an information message on the network the node is connected to, the message containing information representing the results ~~of the subtracting step~~ from said calculating means.

Claim 30. (currently amended): [[System]] A system of ~~synchronisation~~ synchronization between communication networks exchanging information by [[frame]] frames of ~~informations~~ information, each communication network having a clock and the number of clock pulses is monitored by a counter, [[the]] said system comprises ~~the following means~~:

[[-]] first reading means for reading information representing the counted clock pulses of the clock of the first network at the appearance of a reference event[[,]];

[[-]] inserting means for inserting at least [[said]] the information or calculated information on the basis of [[said]] information into the frame of information as the ~~synchronisation~~ synchronization information[[,]];

[[-]] transferring means for transferring [[said]] the frame of information from [[the]] a first network to [[the]] a second network[[,]];

[[-]] sampling means for sampling the received frame of information in order to form sampled data[[,]];

[[-]] processing means for processing the sampled data in order to detect ~~among~~ ~~said~~ from the sampled data a specific data[[,]];

[[-]] monitoring means for monitoring the number of processed sampled data until [[the]] detection of [[a]] the specific data[[,]];

[[-]] generating means for generating [[a]] the reference event according to the result of said monitoring means[[,]];

[[-]] second reading means for reading information representing the number of counted clock pulse of the clock of the second network at the appearance of the reference event[[,]];

[[-]] third reading means for reading synchronization ~~synchronisation~~ information inserted in the received frame of information from the first network[[,]];

[[-]] calculating means for calculating a difference between [[read]] the information representing the number of counted clock pulses of the clock of the second network at the appearance of the reference event and the synchronization information[[,]]; and

[[- synchronising]] synchronization means for ~~synchronising~~ synchronizing the second network.

Claim 31 (currently amended): A memory medium for storing a program to be executed in an apparatus for generating a reference event in a receiving network node receiving frames of information from a transmitting network node, [[the]] said program comprising:

[[-]] code for sampling the frame of information in order to form sampled data[[,]];

[[-]] code for processing the sampled data in order to detect ~~among said~~ from the sampled data a specific data[[,]];

[[-]] code for monitoring the number of processed sampled data until the detection of [[a]] the specific data[[,]]; and

[[-]] code for generating from the received frame of information the [[a]] reference event ~~according to~~ on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result of said monitoring code.

Claim 32 (currently amended): A program stored in a memory medium in an apparatus for generating a reference event in a receiving network node receiving frames of information from a transmitting network node, [[the]] said program comprising:

[[-]] code for sampling the frame of information in order to form sampled data[[,]];

[[-]] code for processing the sampled data in order to detect ~~among said~~ from the sampled data a specific data[[,]];

[[-]] code for monitoring the number of processed sampled data until the detection of [[a]] the specific data[[,]]; and

[[-]] code for generating from the received frame of information a reference event ~~according to~~ on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result of said monitoring code.

Claim 33. (currently amended): ~~Apparatus~~ An apparatus for generating a reference event in a receiving network node receiving frames of information from a transmitting network node, [[the]] said apparatus comprises:

[[-]] a processor for sampling the frame of information in order to form sampled data, for processing sampled data in order to detect ~~among said~~ from the sampled data a specific data, for monitoring the number of processed sampled data until the detection of [[a]] the specific data, and for generating from the received frame of information the [[a]] reference event ~~according to~~ on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result of the monitoring ~~operations~~ operation of said processor.